

THE CLAIMS

While the invention has been illustrated and described in detail, this is to be considered as illustrative and not restrictive of the patent rights. The reader should

5 understand that only the preferred embodiments have been presented and all changes and modifications that come within the spirit of the invention are included if the following claims or the legal equivalent of these claims describes them.

I claim:

1. An optical storage medium, comprising:
a first layer having a first pattern of features in at least one major surface;
a semi-reflective layer, the semi-reflective layer including a metal alloy, said metal alloy including silver and copper, wherein the relationship between the amounts of silver and copper in the metal alloy is defined by Ag_xCu_y where $0.90 < x < 0.9999$ and $0.0001 < y < 0.10$;
a second layer having a second pattern of features in at least one major surface; and
a high reflective layer.

2. The optical storage medium of claim 1, further comprising an optically recordable dye layer adjacent said semi-reflective layer.

3. The optical storage medium of claim 2, wherein the first pattern of features includes a spiral groove.

4. The optical storage medium of claim 1, wherein $0.001 < y < 0.05$.

5. The optical storage medium of claim 1, wherein said metal alloy further includes element A, wherein element A is selected from the group of elements consisting of cadmium, lithium, indium, chromium, antimony, gallium, germanium, boron, molybdenum, zirconium, and beryllium, and wherein the relationship between the amounts of silver and element A in the metal alloy is defined by Ag_xA_y wherein $0.9999 < x < 0.9$, $0.0001 < y < 0.1$.

6. The optical storage medium of claim 1, further comprising:
a third layer adjacent said semi-reflective layer, said third layer including a dielectric material;
a fourth layer, said fourth layer including an optically re-recordable material; and
a fifth layer, said fifth layer including a dielectric material.

7. The optical storage medium of claim 6, wherein the first pattern of features includes a spiral groove.

8. The optical storage medium of claim 6, wherein said optically re-recordable material is a phase-changeable material.

9. The optical storage medium of claim 8, wherein said optically re-recordable material further comprises a phase changeable material selected from the group consisting of Ge-Sb-Te, As-In-Sb-Te, Cr-Ge-Sb-Te, As-Te-Ge, Te-Ge-Sn, Te-Ge-Sn-O, Te-Se, Sn-Te-Se, Te-Ge-Sn-Au, Ge-Sb-Te, Sb-Te-Se, In-Se-Tl, In Sb, In-Sb-Se, In-Se-Tl-Co, Bi-Ge, Bi-Ge-Sb, Bi-Ge-Te, and Si-Te-Sn.

10. The optical storage medium of claim 6, wherein said optically re-recordable material is a magneto-optic material.

11. The optical storage medium of claim 10, wherein said optically re-recordable material further comprises a magneto-optic material selected from the group consisting of Tb-Fe-Co and Gd-Tb-Fe.

12. An optical storage medium, comprising:
a first layer having a first pattern of features in at least one major surface;
a semi-reflective layer, the semi-reflective layer including a metal alloy, said metal alloy including silver and zinc, wherein the relationship between the amounts of

silver and zinc in the metal alloy is defined by Ag_xZn_y
where $0.85 < x < 0.9999$ and $0.0001 < y < 0.15$;
a second layer having a second pattern of features in at
least one major surface; and
a high reflective layer.

13. The optical storage medium of claim 12, further
comprising an optically recordable dye layer adjacent said
semi-reflective layer.

14. The optical storage medium of claim 13, wherein
the first pattern of features includes a spiral groove.

15. The optical storage medium of claim 12, wherein
 $0.001 < y < 0.05$.

16. The optical storage medium of claim 12, further
comprising:
a third layer adjacent said semi-reflective layer, said
third layer including a dielectric material;
a fourth layer, said fourth layer including an optically re-
recordable material; and
a fifth layer, said fifth layer including a dielectric
material.

17. The optical storage medium of claim 16, wherein the first pattern of features includes a spiral groove.

18. The optical storage medium of claim 16, wherein said optically re-recordable material is a phase-changeable material.

19. The optical storage medium of claim 18, wherein said optically re-recordable material further comprises a phase changeable material selected from the group consisting of Ge-Sb-Te, As-In-Sb-Te, Cr-Ge-Sb-Te, As-Te-Ge, Te-Ge-Sn, Te-Ge-Sn-O, Te-Se, Sn-Te-Se, Te-Ge-Sn-Au, Ge-Sb-Te, Sb-Te-Se, In-Se-Tl, In Sb, In-Sb-Se, In-Se-Tl-Co, Bi-Ge, Bi-Ge-Sb, Bi-Ge-Te, and Si-Te-Sn.

20. The optical storage medium of claim 16, wherein said optically re-recordable material is a magneto-optic material.

21. The optical storage medium of claim 20, wherein said optically re-recordable material further comprises a magneto-optic material selected from the group consisting of Tb-Fe-Co and Gd-Tb-Fe.

22. An optical storage medium, comprising:
a first layer having a first pattern of features in at least one major surface;
a semi-reflective layer, the semi-reflective layer including a metal alloy, said metal alloy including silver and manganese, wherein the relationship between the amounts of silver and manganese in the metal alloy is defined by Ag_xMn_y where $0.90 < x < 0.9999$ and $0.0001 < y < 0.10$;
a second layer having a second pattern of features in at least one major surface; and
a high reflective layer.

23. The optical storage medium of claim 22, further comprising an optically recordable dye layer adjacent said semi-reflective layer.

24. The optical storage medium of claim 23, wherein the first pattern of features includes a spiral groove.

25. The optical storage medium of claim 22, wherein $0.001 < y < 0.05$.

26. The optical storage medium of claim 22, further comprising:

a third layer adjacent said semi-reflective layer, said third layer including a dielectric material;

a fourth layer, said fourth layer including an optically re-recordable material; and

a fifth layer, said fifth layer including a dielectric material.

27. The optical storage medium of claim 26, wherein the first pattern of features includes a spiral groove.

28. The optical storage medium of claim 26, wherein said optically re-recordable material is a phase-changeable material.

29. The optical storage medium of claim 28, wherein said optically re-recordable material further comprises a phase changeable material selected from the group consisting of Ge-Sb-Te, As-In-Sb-Te, Cr-Ge-Sb-Te, As-Te-Ge, Te-Ge-Sn, Te-Ge-Sn-O, Te-Se, Sn-Te-Se, Te-Ge-Sn-Au, Ge-Sb-Te, Sb-Te-Se, In-Se-Tl, In Sb, In-Sb-Se, In-Se-Tl-Co, Bi-Ge, Bi-Ge-Sb, Bi-Ge-Te, and Si-Te-Sn.

30. The optical storage medium of claim 26, wherein said optically re-recordable material is a magneto-optic material.

31. The optical storage medium of claim 30, wherein said optically re-recordable material further comprises a magneto-optic material selected from the group consisting of Tb-Fe-Co and Gd-Tb-Fe.

32. An optical storage medium, comprising:
a first layer having a first pattern of features in at least one major surface;
a semi-reflective layer, the semi-reflective layer including a metal alloy, said metal alloy including silver and titanium, wherein the relationship between the amounts of silver and titanium in the metal alloy is defined by Ag_xTi_y where $0.95 < x < 0.9999$ and $0.0001 < y < 0.05$;
a second layer having a second pattern of features in at least one major surface; and
a high reflective layer.

33. The optical storage medium of claim 32, further comprising an optically recordable dye layer adjacent said semi-reflective layer.

34. The optical storage medium of claim 33, wherein the first pattern of features includes a spiral groove.

35. The optical storage medium of claim 32, wherein $0.001 < y < 0.03$.

36. The optical storage medium of claim 32, further comprising:

a third layer adjacent said semi-reflective layer, said third layer including a dielectric material;
a fourth layer, said fourth layer including an optically re-recordable material; and
a fifth layer, said fifth layer including a dielectric material.

37. The optical storage medium of claim 36, wherein the first pattern of features includes a spiral groove.

38. The optical storage medium of claim 36, wherein said optically re-recordable material is a phase-changeable material.

39. The optical storage medium of claim 38, wherein said optically re-recordable material further comprises a

phase changeable material selected from the group consisting of Ge-Sb-Te, As-In-Sb-Te, Cr-Ge-Sb-Te, As-Te-Ge, Te-Ge-Sn, Te-Ge-Sn-O, Te-Se, Sn-Te-Se, Te-Ge-Sn-Au, Ge-Sb-Te, Sb-Te-Se, In-Se-Tl, In Sb, In-Sb-Se, In-Se-Tl-Co, Bi-Ge, Bi-Ge-Sb, Bi-Ge-Te, and Si-Te-Sn.

40. The optical storage medium of claim 36, wherein said optically re-recordable material is a magneto-optic material.

41. The optical storage medium of claim 40, wherein said optically re-recordable material further comprises a magneto-optic material selected from the group consisting of Tb-Fe-Co and Gd-Tb-Fe.

42. An optical storage medium, comprising:
a first layer having a first pattern of features in at least one major surface;
a semi-reflective layer, the semi-reflective layer including a metal alloy, said metal alloy including silver and nickel, wherein the relationship between the amounts of silver and nickel in the metal alloy is defined by Ag_xNi_y where $0.95 < x < 0.9999$ and $0.0001 < y < 0.05$;

a second layer having a second pattern of features in at least one major surface; and
a high reflective layer.

43. The optical storage medium of claim 42, further comprising an optically recordable dye layer adjacent said semi-reflective layer.

44. The optical storage medium of claim 43, wherein the first pattern of features includes a spiral groove.

45. The optical storage medium of claim 42, wherein $0.001 < y < 0.03$.

46. The optical storage medium of claim 42, further comprising:
a third layer adjacent said semi-reflective layer, said third layer including a dielectric material;
a fourth layer, said fourth layer including an optically recordable material; and
a fifth layer, said fifth layer including a dielectric material.

47. The optical storage medium of claim 46, wherein the first pattern of features includes a spiral groove.

48. The optical storage medium of claim 46, wherein said optically re-recordable material is a phase-changeable material.

49. The optical storage medium of claim 48, wherein said optically re-recordable material further comprises a phase changeable material selected from the group consisting of Ge-Sb-Te, As-In-Sb-Te, Cr-Ge-Sb-Te, As-Te-Ge, Te-Ge-Sn, Te-Ge-Sn-O, Te-Se, Sn-Te-Se, Te-Ge-Sn-Au, Ge-Sb-Te, Sb-Te-Se, In-Se-Tl, In Sb, In-Sb-Se, In-Se-Tl-Co, Bi-Ge, Bi-Ge-Sb, Bi-Ge-Te, and Si-Te-Sn.

50. The optical storage medium of claim 46, wherein said optically re-recordable material is a magneto-optic material.

51. The optical storage medium of claim 50, wherein said optically re-recordable material further comprises a magneto-optic material selected from the group consisting of Tb-Fe-Co and Gd-Tb-Fe.

52. An optical storage medium, comprising:
a first layer having a first pattern of features in at least one major surface;
a semi-reflective layer, the semi-reflective layer including a metal alloy, said metal alloy including silver and tin, wherein the relationship between the amounts of silver and tin in the metal alloy is defined by Ag_xSn_y where $0.90 < x < 0.9999$ and $0.0001 < y < 0.10$;
a second layer having a second pattern of features in at least one major surface; and
a high reflective layer.

53. The optical storage medium of claim 52, further comprising an optically recordable dye layer adjacent said semi-reflective layer.

54. The optical storage medium of claim 53, wherein the first pattern of features includes a spiral groove.

55. The optical storage medium of claim 52, wherein $0.001 < y < 0.05$.

56. The optical storage medium of claim 52, further comprising:

a third layer adjacent said semi-reflective layer, said
third layer including a dielectric material;
a fourth layer, said fourth layer including an optically re-
recordable material; and
a fifth layer, said fifth layer including a dielectric
material.

57. The optical storage medium of claim 56, wherein
the first pattern of features includes a spiral groove.

58. The optical storage medium of claim 56, wherein
said optically re-recordable material is a phase-changeable
material.

59. The optical storage medium of claim 58, wherein
said optically re-recordable material further comprises a
phase changeable material selected from the group consisting
of Ge-Sb-Te, As-In-Sb-Te, Cr-Ge-Sb-Te, As-Te-Ge, Te-Ge-Sn,
Te-Ge-Sn-O, Te-Se, Sn-Te-Se, Te-Ge-Sn-Au, Ge-Sb-Te, Sb-Te-
Se, In-Se-Tl, In Sb, In-Sb-Se, In-Se-Tl-Co, Bi-Ge, Bi-Ge-Sb,
Bi-Ge-Te, and Si-Te-Sn.

60. The optical storage medium of claim 56, wherein said optically re-recordable material is a magneto-optic material.

61. The optical storage medium of claim 60, wherein said optically re-recordable material further comprises a magneto-optic material selected from the group consisting of Tb-Fe-Co and Gd-Tb-Fe.

62. An optical storage medium, comprising:
a first layer having a first pattern of features in at least one major surface;
a semi-reflective layer, the semi-reflective layer including a metal alloy, said metal alloy including silver and silicon, wherein the relationship between the amounts of silver and silicon in the metal alloy is defined by Ag_xSi_y where $0.90 < x < 0.9999$ and $0.0001 < y < 0.10$;
a second layer having a second pattern of features in at least one major surface; and
a high reflective layer.

63. The optical storage medium of claim 62, further comprising an optically recordable dye layer adjacent said semi-reflective layer.

64. The optical storage medium of claim 63, wherein the first pattern of features includes a spiral groove.

65. The optical storage medium of claim 62, wherein $0.001 < y < 0.05$.

66. The optical storage medium of claim 62, further comprising:

a third layer adjacent said semi-reflective layer, said third layer including a dielectric material;
a fourth layer, said fourth layer including an optically re-recordable material; and
a fifth layer, said fifth layer including a dielectric material.

67. The optical storage medium of claim 66, wherein the first pattern of features includes a spiral groove.

68. The optical storage medium of claim 66, wherein said optically re-recordable material is a phase-changeable material.

69. The optical storage medium of claim 68, wherein said optically re-recordable material further comprises a

phase changeable material selected from the group consisting of Ge-Sb-Te, As-In-Sb-Te, Cr-Ge-Sb-Te, As-Te-Ge, Te-Ge-Sn, Te-Ge-Sn-O, Te-Se, Sn-Te-Se, Te-Ge-Sn-Au, Ge-Sb-Te, Sb-Te-Se, In-Se-Tl, In Sb, In-Sb-Se, In-Se-Tl-Co, Bi-Ge, Bi-Ge-Sb, Bi-Ge-Te, and Si-Te-Sn.

70. The optical storage medium of claim 66, wherein said optically re-recordable material is a magneto-optic material.

71. The optical storage medium of claim 70, wherein said optically re-recordable material further comprises a magneto-optic material selected from the group consisting of Tb-Fe-Co and Gd-Tb-Fe.

72. An optical storage medium, comprising:
a first layer having a first pattern of features in at least one major surface;
a semi-reflective layer, the semi-reflective layer including a metal alloy, said metal alloy including silver and aluminum, wherein the relationship between the amounts of silver and aluminum in the metal alloy is defined by Ag_xAl_y where $0.90 < x < 0.9999$ and $0.0001 < y < 0.10$;

a second layer having a second pattern of features in at least one major surface; and
a high reflective layer.

73. The optical storage medium of claim 72, further comprising an optically recordable dye layer adjacent said semi-reflective layer.

74. The optical storage medium of claim 73, wherein the first pattern of features includes a spiral groove.

75. The optical storage medium of claim 72, wherein $0.001 < y < 0.05$.

76. The optical storage medium of claim 72, further comprising:

a third layer adjacent said semi-reflective layer, said third layer including a dielectric material;
a fourth layer, said fourth layer including an optically recordable material; and
a fifth layer, said fifth layer including a dielectric material.

77. The optical storage medium of claim 76, wherein the first pattern of features includes a spiral groove.

78. The optical storage medium of claim 76, wherein said optically re-recordable material is a phase-changeable material.

79. The optical storage medium of claim 78, wherein said optically re-recordable material further comprises a phase changeable material selected from the group consisting of Ge-Sb-Te, As-In-Sb-Te, Cr-Ge-Sb-Te, As-Te-Ge, Te-Ge-Sn, Te-Ge-Sn-O, Te-Se, Sn-Te-Se, Te-Ge-Sn-Au, Ge-Sb-Te, Sb-Te-Se, In-Se-Tl, In Sb, In-Sb-Se, In-Se-Tl-Co, Bi-Ge, Bi-Ge-Sb, Bi-Ge-Te, and Si-Te-Sn.

80. The optical storage medium of claim 76, wherein said optically re-recordable material is a magneto-optic material.

81. The optical storage medium of claim 80, wherein said optically re-recordable material further comprises a magneto-optic material selected from the group consisting of Tb-Fe-Co and Gd-Tb-Fe.

82. An optical storage medium, comprising:
a first layer having a first pattern of features in at least one major surface;
a semi-reflective layer, the semi-reflective layer including a metal alloy, said metal alloy including silver and indium, wherein the relationship between the amounts of silver and indium in the metal alloy is defined by Ag_xIn_y where $0.90 < x < 0.9999$ and $0.0001 < y < 0.10$;
a second layer having a second pattern of features in at least one major surface; and
a high reflective layer.

83. The optical storage medium of claim 82, further comprising an optically recordable dye layer adjacent said semi-reflective layer.

84. The optical storage medium of claim 83, wherein the first pattern of features includes a spiral groove.

85. The optical storage medium of claim 82, wherein $0.001 < y < 0.05$.

86. The optical storage medium of claim 82, further comprising:

a third layer adjacent said semi-reflective layer, said
third layer including a dielectric material;
a fourth layer, said fourth layer including an optically re-
recordable material; and
a fifth layer, said fifth layer including a dielectric
material.

87. The optical storage medium of claim 86, wherein
the first pattern of features includes a spiral groove.

88. The optical storage medium of claim 86, wherein
said optically re-recordable material is a phase-changeable
material.

89. The optical storage medium of claim 88, wherein
said optically re-recordable material further comprises a
phase changeable material selected from the group consisting
of Ge-Sb-Te, As-In-Sb-Te, Cr-Ge-Sb-Te, As-Te-Ge, Te-Ge-Sn,
Te-Ge-Sn-O, Te-Se, Sn-Te-Se, Te-Ge-Sn-Au, Ge-Sb-Te, Sb-Te-
Se, In-Se-Tl, In Sb, In-Sb-Se, In-Se-Tl-Co, Bi-Ge, Bi-Ge-Sb,
Bi-Ge-Te, and Si-Te-Sn.

90. The optical storage medium of claim 86, wherein said optically re-recordable material is a magneto-optic material.

91. The optical storage medium of claim 90, wherein said optically re-recordable material further comprises a magneto-optic material selected from the group consisting of Tb-Fe-Co and Gd-Tb-Fe.

92. An optical storage medium, comprising:
a first layer having a first pattern of features in at least one major surface;
a semi-reflective layer, the semi-reflective layer including a metal alloy, said metal alloy including silver, copper and zinc, wherein the relationship between the amounts of silver, copper, and zinc in the metal alloy is defined by $\text{Ag}_x\text{Cu}_w\text{Zn}_z$ where $0.80 < x < 0.9998$, $0.0001 < w < 0.10$, $0.0001 < z < 0.10$;
a second layer having a second pattern of features in at least one major surface; and
a high reflective layer.

93. The optical storage medium of claim 92, further comprising an optically recordable dye layer adjacent said semi-reflective layer.

94. The optical storage medium of claim 93, wherein the first pattern of features includes a spiral groove.

95. The optical storage medium of claim 92, further comprising:

a third layer adjacent said semi-reflective layer, said third layer including a dielectric material;

a fourth layer, said fourth layer including an optically re-recordable material; and

a fifth layer, said fifth layer including a dielectric material.

96. The optical storage medium of claim 95, wherein the first pattern of features includes a spiral groove.

97. The optical storage medium of claim 95, wherein said optically re-recordable material is a phase-changeable material.

98. The optical storage medium of claim 97, wherein said optically re-recordable material further comprises a phase changeable material selected from the group consisting of Ge-Sb-Te, As-In-Sb-Te, Cr-Ge-Sb-Te, As-Te-Ge, Te-Ge-Sn, Te-Ge-Sn-O, Te-Se, Sn-Te-Se, Te-Ge-Sn-Au, Ge-Sb-Te, Sb-Te-Se, In-Se-Tl, In Sb, In-Sb-Se, In-Se-Tl-Co, Bi-Ge, Bi-Ge-Sb, Bi-Ge-Te, and Si-Te-Sn.

99. The optical storage medium of claim 95, wherein said optically re-recordable material is a magneto-optic material.

100. The optical storage medium of claim 99, wherein said optically re-recordable material further comprises a magneto-optic material selected from the group consisting of Tb-Fe-Co and Gd-Tb-Fe.

101. An optical storage medium, comprising:
a first layer having a first pattern of features in at least one major surface;
a semi-reflective layer, the semi-reflective layer including a metal alloy, said metal alloy including silver; and
an element A, wherein element A is selected from the group consisting of cadmium, germanium, lithium, cobalt,

chromium, antimony, gallium, boron, molybdenum,
zirconium, and beryllium and wherein the relationship
between the amounts of silver and element A defined by
 Ag_xA_y where $0.90 < x < 0.9999$ and $0.0001 < y < 0.10$;
a second layer having a second pattern of features in at
least one major surface; and
a high reflective layer.

102. The optical storage medium of claim 101, further
comprising an optically recordable dye layer adjacent said
semi-reflective layer.

103. The optical storage medium of claim 102, wherein
the first pattern of features includes a spiral groove.

104. The optical storage medium of claim 101, wherein
 $0.001 < y < 0.05$.

105. The optical storage medium of claim 101, wherein
said metal alloy includes element B, wherein element B is
selected from the group of elements consisting of gold,
rhodium, ruthenium, osmium, iridium, platinum, and palladium
and wherein the relationship between the amounts of silver

and element B in the metal alloy is defined by Ag_xB_v wherein $0.09 < x < 0.0001$ and $0.0001 < v < 0.05$.

106. The optical storage medium of claim 101, further comprising:
a third layer adjacent said semi-reflective layer, said
third layer including a dielectric material;
a fourth layer, said fourth layer including an optically re-
recordable material; and
a fifth layer, said fifth layer including a dielectric
material.

107. The optical storage medium of claim 106, wherein
the first pattern of features includes a spiral groove.

108. The optical storage medium of claim 106, wherein
said optically re-recordable material is a phase-changeable
material.

109. The optical storage medium of claim 108, wherein
said optically re-recordable material further comprises a
phase changeable material selected from the group consisting
of Ge-Sb-Te, As-In-Sb-Te, Cr-Ge-Sb-Te, As-Te-Ge, Te-Ge-Sn,
Te-Ge-Sn-O, Te-Se, Sn-Te-Se, Te-Ge-Sn-Au, Ge-Sb-Te, Sb-Te-

Se, In-Se-Tl, In Sb, In-Sb-Se, In-Se-Tl-Co, Bi-Ge, Bi-Ge-Sb, Bi-Ge-Te, and Si-Te-Sn.

110. The optical storage medium of claim 106, wherein said optically re-recordable material is a magneto-optic material.

111. The optical storage medium of claim 110, wherein said optically re-recordable material further comprises a magneto-optic material selected from the group consisting of Tb-Fe-Co and Gd-Tb-Fe.

112. An optical storage medium, comprising:
a first layer having a first pattern of features in at least one major surface;
a semi-reflective layer, the semi-reflective layer including a metal alloy, said metal alloy including silver, copper, and an element A, wherein element A is selected from the group of elements consisting of titanium and silicon, and wherein the relationship between the amounts of silver, copper, and element A defined by $Ag_xCu_wA_y$ where $0.85 < x < 0.9998$, $0.0001 < w < 0.1$, and $0.0001 < y < 0.05$;

a second layer having a second pattern of features in at least one major surface; and
a high reflective layer.

113. The optical storage medium of claim 112, further comprising an optically recordable dye layer adjacent said semi-reflective layer.

114. The optical storage medium of claim 112, wherein the first pattern of features includes a spiral groove.

115. The optical storage medium of claim 112, further comprising:
a third layer adjacent said semi-reflective layer, said third layer including a dielectric material;
a fourth layer, said fourth layer including an optically recordable material; and
a fifth layer, said fifth layer including a dielectric material.

116. The optical storage medium of claim 115, wherein the first pattern of features includes a spiral groove.

117. The optical storage medium of claim 115, wherein said optically re-recordable material is a phase-changeable material.

118. The optical storage medium of claim 117, wherein said optically re-recordable material further comprises a phase changeable material selected from the group consisting of Ge-Sb-Te, As-In-Sb-Te, Cr-Ge-Sb-Te, As-Te-Ge, Te-Ge-Sn, Te-Ge-Sn-O, Te-Se, Sn-Te-Se, Te-Ge-Sn-Au, Ge-Sb-Te, Sb-Te-Se, In-Se-Tl, In Sb, In-Sb-Se, In-Se-Tl-Co, Bi-Ge, Bi-Ge-Sb, Bi-Ge-Te, and Si-Te-Sn.

119. The optical storage medium of claim 115, wherein said optically re-recordable material is a magneto-optic material.

120. The optical storage medium of claim 119, wherein said optically re-recordable material further comprises a magneto-optic material selected from the group consisting of Tb-Fe-Co and Gd-Tb-Fe.